

Title (en)  
POSITIVE ELECTRODE ACTIVE MATERIAL AND PREPARATION METHOD THEREFOR, POSITIVE ELECTRODE PLATE COMPRISING SAME, SECONDARY BATTERY AND ELECTRIC DEVICE

Title (de)  
POSITIVELEKTRODENAKTIVMATERIAL UND HERSTELLUNGSVERFAHREN DAFÜR, POSITIVELEKTRODENPLATTE DAMIT, SEKUNDÄRBATTERIE UND ELEKTRISCHE VORRICHTUNG

Title (fr)  
MATÉRIAU ACTIF D'ÉLECTRODE POSITIVE ET SON PROCÉDÉ DE PRÉPARATION, PLAQUE D'ÉLECTRODE POSITIVE LE COMPRENANT, BATTERIE SECONDAIRE ET DISPOSITIF ÉLECTRIQUE

Publication  
**EP 4386905 A1 20240619 (EN)**

Application  
**EP 22934336 A 20220401**

Priority  
CN 2022084877 W 20220401

Abstract (en)  
The present application provides a positive electrode active material, a method for the preparation thereof and a positive electrode plate, a secondary battery and an electrical device containing the same. The positive electrode active material has a core-shell structure, including a core and a shell cladding the core, wherein the core includes  $\text{Li}_{1+x}\text{Mn}_{1-y}\text{A}_y\text{P}_{1-z}\text{R}_z\text{O}_4$ , the shell includes a first cladding layer cladding the core, a second cladding layer cladding the first cladding layer and a third cladding layer cladding the second cladding layer. The positive electrode active material of the present application enables the secondary battery to have a relatively high energy density, and good rate performance, cycling performance and safety performance.

IPC 8 full level  
**H01M 4/505** (2010.01); **H01M 4/36** (2006.01); **H01M 4/525** (2010.01)

CPC (source: EP US)  
**H01M 4/0471** (2013.01 - US); **H01M 4/136** (2013.01 - EP); **H01M 4/1397** (2013.01 - EP); **H01M 4/36** (2013.01 - EP); **H01M 4/366** (2013.01 - EP US); **H01M 4/505** (2013.01 - EP); **H01M 4/525** (2013.01 - EP); **H01M 4/5825** (2013.01 - EP US); **H01M 4/583** (2013.01 - US); **H01M 4/608** (2013.01 - US); **H01M 4/625** (2013.01 - EP); **H01M 10/0525** (2013.01 - EP); **H01M 2004/021** (2013.01 - US); **H01M 2004/028** (2013.01 - US); **Y02E 60/10** (2013.01 - EP)

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**EP 4386905 A1 20240619**; CN 117461165 A 20240126; US 2024332515 A1 20241003; WO 2023184504 A1 20231005

DOCDB simple family (application)  
**EP 22934336 A 20220401**; CN 2022084877 W 20220401; CN 202280039893 A 20220401; US 202418740459 A 20240611